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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,389	01/25/2005	Herman Jan Pel	246152024900	8008
23117 7590 03/28/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER WALICKA, MALGORZATA A	
			ART UNIT	PAPER NUMBER
			1652	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
31 DAYS		03/28/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/522,389

Applicant(s)

PEL ET AL.

Examiner

Malgorzata A. Walicka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-27 and 29-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1, 3-27 and 29-41 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to: See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 3-5, 16, 27 all partially, drawn to a polypeptide and a process for producing vitamin B12, in so far as the subject matter relates to SEQ ID NO: 2.

Group II, claim(s) 6-15 and 33 all partially, drawn to polynucleotide, vector, host cell, process of producing a polypeptide, in so far as the subject matter relates to SEQ ID NO: 1.

Group III, claim(s) 17-18 completely, drawn to a process for preparation of an amine by the polypeptide of SEQ ID NO: 2.

Group IV, claim(s) 34 completely, drawn to a process for preparation of an amine by the cell transformed with a DNA of SEQ ID NO: 1.

Group V, claim(s) claim(s) 1, 3-5, 16, 27 all partially, drawn to a polypeptide and a process for producing vitamin B12, in so far as the subject matter relates to SEQ ID NO: 4.

Group VI, claim(s) 6-15 and 33 all partially, drawn to polynucleotide, vector, host cell, process of producing a polypeptide, in so far as the subject matter relates to SEQ ID NO: 3.

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- Group VII, claim(s) 19-22 completely, drawn to a process for preparation of a phosphate containing compound and a nucleotidyl using the polypeptide of SEQ ID NO: 4.
- Group VIII, claim(s) 35-36 completely, drawn to a process for preparation of a phosphate containing compound and a nucleotidyl –containing compound by a cell transformed with SEQ ID NO: 3.
- Group IX claim(s) 1, 3-5, 16, 27 all partially, drawn to a polypeptide and a process for producing vitamin B12, in so far as the subject matter relates to SEQ ID NO: 6.
- Group X claim(s) 6-15 and 33 all partially, drawn to polynucleotide, vector, host cell, process of producing a polypeptide, in so far as the subject matter relates to SEQ ID NO: 5.
- Group XI claim(s) 23-24 completely, drawn to a process for preparation of an aryl-containing compound by the polypeptide of SEQ ID NO: 6.
- Group XII claim(s) 37 completely, drawn to a process for preparation of an aryl-containing compound by a cell transformed with SEQ ID NO: 5.
- Group XIII claim(s) 1, 3-5, 16, 27 all partially, drawn to a polypeptide and a process for producing vitamin B12, in so far as the subject matter relates to SEQ ID NO: 8.

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Group XIV claim(s) 6-15 and 33 all partially, drawn to polynucleotide, vector, host cell, process of producing a polypeptide, in so far as the subject matter relates to SEQ ID NO.

Group XV claim(s) 25-26 and 39 completely, drawn to a process for preparation of an adenosine-containing compound by polypeptide of SEQ ID NO: 8.

Group XVI Claim 38 drawn a process for preparation of an adenosine- containing compound by a cell transformed with SEQ ID NO: 7.

Group XVII claim 29 in its entirety, directed to a vector comprising comprising polynucleotides of SEQ ID NO: 3 and 5 or variants thereof,

Group XVIII claims 30-31, in part, directed to a vector comprising polynucleotide of SEQ ID NO: 1, or related polynucleotides, and a nucleotide sequence encoding a CobA protein.

Group XIX claims 30-31, in part, directed to a vector comprising polynucleotide of SEQ ID NO: 3, or related polynucleotides, and a nucleotide sequence encoding a CobA protein.

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Group XX claims 30-31, in part, directed to a vector comprising polynucleotide of SEQ ID NO: 5, or related polynucleotides, and a nucleotide sequence encoding a CobA protein.

Group XXI claims 30-31, in part, directed to a vector comprising polynucleotide of SEQ ID NO: 7, or related polynucleotides, and a nucleotide sequence encoding a CobA protein.

Group XXII claims 40-41 in their entireties, directed to a vector comprising polynucleotide of SEQ ID NO: 3 and 5 or their variants and a polynucleotide encoding a CobA protein.

The inventions listed as Groups I-XXII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

As indicated in the IPER of the related PCT/EP 03/08216, of which the instant application is the national stage application, the only technical relationship linking together sequences SEQ ID NOs: 1, 3, 5, 7, 2, 4, 6, 8, can be seen in the fact that they are DNAs and enzymes which are involved in the biosynthesis of vitamin B<sub>12</sub>. However, because such enzymes are known even for *Propionibacterium freudenreichii* (Roessner et al. 2002, included in IDS), the technical relationship cannot constitute a special technical feature because it is not a contribution over the prior art. Thus each of the

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enzymes of SEQ ID NOs: 2, 4, 6, 8 their encoding DNA of SEQ ID NO: 1, 3, 5, and 7, and their methods of use consist independent invention.

In addition, the preliminary amendment of Jan. 25, 2005 by entering new claims 29-36 increased number of products that are vectors. These new products are not used in any of the claimed methods. The common technical feature of Groups XVIII-XXII seems to be that all of them contain a nucleotide sequence that encodes a CobA protein. However, the CobA protein has been known for many organism at the time the application was filed. Thus, Groups XVIII-XXII are lacking a special technical feature.

In addition, 37 CFR 1.475 does not provide for multiple **products or methods** within single application, therefore, unity of invention is lacking with regard to Groups I-XXII.

For the explained reasons the restriction is proper.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Malgorzata A. Walicka whose telephone number is (571) 272-0944. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 4:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through


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Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Malgorzata A. Walicka, Ph.D.

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Patent Examiner

  
REBECCA E. PROUTY  
PRIMARY EXAMINER  
GROUP 1800  
/bed